



**Re: FW: FW: Water Effect Ratios in Washington**

**Matthew Szelag** to: Niemi, Cheryl (ECY)

Cc: Lisa Macchio

05/10/2011 12:50 PM

Thank you both for continuing this discussion while I've been out of the office. Cheryl, please keep us posted if you want to pursue this in the future.

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"Niemi, Cheryl (ECY)"

Thanks for the clarification Lisa. So I guess...

05/10/2011 11:42:00 AM

From: "Niemi, Cheryl (ECY)" <cnie461@ECY.WA.GOV>  
To: Lisa Macchio/R10/USEPA/US@EPA, Matthew Szelag/R10/USEPA/US@EPA  
Date: 05/10/2011 11:42 AM  
Subject: FW: FW: Water Effect Ratios in Washington

Thanks for the clarification Lisa.

So I guess we still will scope it out internally, and if the need seems great and this becomes a priority we'll talk with you and Matt about how/whether the performance-based approach would work.

Given all the emphasis surrounding fish consumption and human health criteria right now I don't know if we will realistically have the time to try to address WERs, but guess that evaluation will be part of the process. The fish consumption issue continues to be a big focus of time and attention.

Take care, and thanks again,

Cheryl

-----Original Message-----

From: Macchio.Lisa@epamail.epa.gov [mailto:Macchio.Lisa@epamail.epa.gov]  
Sent: Wednesday, May 04, 2011 11:09 AM  
To: Niemi, Cheryl (ECY)  
Cc: Szelag.Matthew@epamail.epa.gov  
Subject: RE: FW: Water Effect Ratios in Washington

Cheryl - I found the text in the EPA approval letter you are referring to. Here it is in its entirety:

4. WQS Provision: WAC 173 201A-240 (3) Toxics Substances Criteria.  
Notes to Table 240(3), footnote dd:  
dd. These ambient criteria in the table are for the dissolved fraction. The cyanide criteria are based on the weak acid dissociable method. The metals criteria may not be used to calculate total recoverable effluent limits unless the seasonal partitioning of the dissolved to total metals in the ambient water are known. When this information is absent, these metals

criteria shall be applied as total recoverable values, determined by back-calculation, using the conversion factors incorporated in the criterion equations. Metals criteria may be adjusted on a site-specific basis when data are made available to the department clearly demonstrating the effective use of the water effects ratio approach established by USEPA as generally guided by the procedures in USEPA Water Quality Standards Handbook, December 1983 as supplemented or replaced by USEPA or ecology. Information which is used to develop effluent limits based on applying metals partitioning studies or water effects ratio approach shall be identified in the permit fact sheet developed pursuant to WAC 173-220-060 or WAC 173-226-110, as appropriate, and shall be made available for the public comment period required pursuant to WAC 173-220-050 or WAC 173-226-130 (3), as appropriate. Ecology has developed supplemental guidance for conducting water effect ratio studies.

EPA ACTION: EPA approves the changes to this provision which adds the use of Ecology guidance to the approaches and general procedures for developing water effect ratios. The federal water quality standards regulations at 40 CFR 131.36(c)(4)(iii) and 131.11 allow for the development of WERs for metals criteria so long as the resulting criteria protects the designated uses from the toxic effects of the pollutant and are developed using scientifically defensible methods. EPA reviewed Appendix 6, Chapter 5 of Ecology's Water Quality Program Permit Writers Manual (Revised July 2006) which contains Ecology's current supplemental guidance on Water Effect Ratios. The information contained in Chapter 5 of Appendix 6 is based on scientifically defensible methods and is appropriate in providing guidance in developing WERs and based on our evaluation would be as protective as EPA's guidance for developing WERs. When EPA reviews the application of a **WER**, we will review any method used to develop each **WER** to ensure consistency with EPA's guidance. The additional language referring to Ecology guidance does not alter the substance of footnote "dd", but simply provides additional guidance which can be used for conducting **WER** studies. EPA is not reassessing or re-approving the underlying previously approved standard.

Cheryl - EPA was approving the underlined and bolded text above. We were not implying that we were approving the guidance, only that we reviewed it and found it was appropriate. EPA does not approve guidance as it is not an element under the wqs regulations that EPA approves or disapproves. We do however review guidance to determine if it undermines the standard. I can explain this to you in more detail if you need it. But bottom line here is that EPA did not approve Ecology's guidance with the wording above.

From: "Niemi, Cheryl (ECY)" <cnie461@ECY.WA.GOV>  
To: Lisa Macchio/R10/USEPA/US@EPA, Matthew  
Szilag/R10/USEPA/US@EPA  
Date: 05/04/2011 08:31 AM  
Subject: RE: FW: Water Effect Ratios in Washington

Thanks Lisa.

We are now doing an internal evaluation to see if the permit managers are under pressure to do WERs. We received a lot of comments about them in the triennial review scoping but are doing the internal truth-check to see how important it really seems to be. So - we should probably wait for a month or so until that exercise is done before I start using more of your time on this.

However, I am confused by your e-mail below because I read the Feb 11, 2008 approval letter (page 70) to mean that the WER toxicity guidance we had in the permit writer's manual was formally approved by EPA, and that Charlie's review was part of this. Here's the language from the letter: "The information contained in Chapter 5 of Appendix 6 is based on scientifically defensible methods and is appropriate in providing guidance in developing WERs and based on our evaluation would be as protective as EPA's guidance for developing WERs." I read this part of the letter to mean this was CWA approved. But - if we wanted to go for the performance-based approach (to use WERs in permits) we'd have to develop the rest of the program and also get that approved by you. That would include guidance on implementation, oversight, review, public process, tracking, etc.

I agree that any type of site-specific criteria development needs a tremendous amount of technical oversight. My experience with SSC development for metals and cyanide have been "intense" experiences - both technically and policy-wise, and I don't assume that going the performance-based route would let us off the hook for a high level of review. Figure that anything going through ESA review and CWA approval at this time needs to carry quite a lot of assurance that it will work.

So- are you sure the WER guidance for tox testing was not approved?  
What more would it need?

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-----Original Message-----

From: Macchio.Lisa@epamail.epa.gov [mailto:Macchio.Lisa@epamail.epa.gov]

Sent: Monday, May 02, 2011 3:53 PM

To: Niemi, Cheryl (ECY)

Cc: Szelag.Matthew@epamail.epa.gov

Subject: Re: FW: Water Effect Ratios in Washington

Cheryl - I'm just catching up. We should set up a time to discuss what options would be best as you think about how you'd like WERs to be developed and addressed in your WQS. I personally have found WER development very challenging and it requires very close attention to detail. I have found it necessary to have someone involved reviewing the development that is very knowledgeable regarding WER guidance and toxicity testing.

So let's set up some time for the 3 of us to discuss this and I can share my very limited knowledge on this subject.

Don't know if you knew, but I had our "WER" expert, Charlie Delos give your guidance a very brief review back when I was working on this. He seemed to think it looked good. But note- EPA did not provide a detailed review and formal opinion and approval on your guidance.

From: "Niemi, Cheryl (ECY)" <cnie461@ECY.WA.GOV>  
To: Matthew Szelag/R10/USEPA/US@EPA  
Cc: Lisa Macchio/R10/USEPA/US@EPA  
Date: 04/26/2011 11:59 AM  
Subject: FW: Water Effect Ratios in Washington

Hi Matt.

We are thinking about triennial review priorities. We received many comments asking us to revise the standards to allow us to use WERs in permits. I'd like to know, in general, what we would need to do to get to that point. Our toxicity testing guidance was already approved by EPA in the last set of CWA revisions. Lisa worked on that part of the approval. Based on the end of her e-mail below (from when we were working on the Puget Sound Naval Shipyard) it looks like a "performance based" approach might be an option. What would we need to do to get footnote dd of the toxics tale revised to allow us to use WERs in permits?

Thanks,

Cheryl

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From: Macchio.Lisa@epamail.epa.gov [mailto:Macchio.Lisa@epamail.epa.gov]

Sent: Wednesday, September 05, 2007 9:42 AM  
To: Niemi, Cheryl (ECY)  
Cc: Chu.Rebecca@epamail.epa.gov; Jennings.Jannine@epamail.epa.gov;  
Poulsom.Susan@epamail.epa.gov  
Subject: Water Effect Ratios in Washington

Cheryl - I'd like to follow up with you on a committment I made during the conference call between Ecology and EPA on the PSNS proposed WER. I agreed that EPA would look into the Ecology statement/position made on the call regarding WERs and EPA approval.

If I remember correctly, Ecology staff were of the opinion that

individual WERs do not go through State rulemaking and are not submitted to EPA for review and approval.

I have looked into EPA's past approval actions (March 18, 1993 approval, February 22, 1998 approval) in Washington which are relevant and which reveal whether EPA had taken a position consistent with Ecology's opinion. Attached are those letters:

Our review of these actions along with EPA guidance on WERs has led us to the following conclusion:

It is our opinion that Washington's language regarding WERs, as contained in footnote 'dd' to your toxics criteria table, does not satisfy the requirements laid out in option 2 in EPA's 1994 guidance memo and therefore Washington should be submitting each individual WER determination to EPA for review and approval.

For some background -

In 1994, EPA issued guidance on use of the WER in WQS. This document laid out the following two options for States for WERs:

- (1) A State may derive and submit each individual WER determination to EPA for review and approval.
- (2) A State can include in its WQS a formal procedure which includes derivation of WERs, appropriate definition of sites, and enforceable monitoring provisions to assure that designated uses are protected. Both this procedure and the resulting criteria would be subject to full public participation requirements. Public review of a site-specific criterion could be accomplished in conjunction with the public review required for permit issuance. EPA would act on this protocol as a revised standard. For public information, we recommend that once a year the State publish a list of site specific criteria.

Here is a part of that document:

Based on our review of EPA's past actions and EPA's guidance, we are not in agreement with Ecology's opinion regarding the process for WERs. Therefore, if a WER were developed for PSNS it would have to be adopted by Washington into rule and submitted and approved by EPA prior to use in an EPA issued permit.

If Ecology would like to pursue an approach consistent with option (2), EPA and Ecology will need to have discussions as to what is needed in order for that approach to be in effect.

Let us know how you would like to proceed. [attachment "WA 1993 Approval.pdf" deleted by Lisa Macchio/R10/USEPA/US] [attachment "Tudor 1994 WER Guidance.pdf" deleted by Lisa Macchio/R10/USEPA/US] [attachment "1998approval.pdf" deleted by Lisa Macchio/R10/USEPA/US]